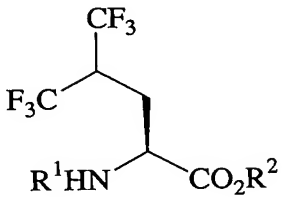
WHAT IS CLAIMED IS:

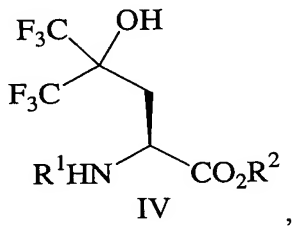
1. A method of making a compound of Formula I,



I ,

or a corresponding stereoisomer having opposite stereochemistry of Formula I, wherein R^1 and R^2 are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

providing a compound having a tertiary hydroxy group as represented by Formula IV,



IV ,

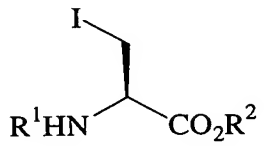
or providing a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein R^1 and R^2 in Formula IV are as defined in Formula I; and

displacing the tertiary hydroxy group to yield the compound of Formula I or the corresponding stereoisomer.

2. The method of claim 1, wherein the tertiary hydroxy group is displaced using radical deoxygenation.

3. The method of claim 1, further comprising:

reacting a compound of Formula III,



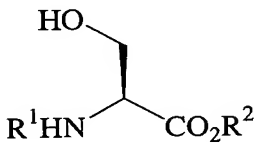
III ,

or a corresponding stereoisomer having opposite stereochemistry of Formula III, with zinc to form an organozinc reagent; and

reacting the organozinc reagent with hexafluoroacetone to yield the compound of Formula IV or the corresponding stereoisomer, wherein R^1 and R^2 in Formula III are as defined in Formula I.

4. The method of claim 3, further comprising:

reacting a compound of Formula II,



II ,

or a corresponding stereoisomer having opposite stereochemistry of Formula II, with an iodinating agent to yield the compound of Formula III or the corresponding stereoisomer, wherein R^1 and R^2 in Formula II are as defined in Formula I.

5. The method of claim 1, further comprising:

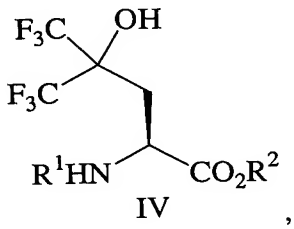
de-protecting the compound of Formula I or the corresponding stereoisomer having opposite stereochemistry of Formula I by replacing R^1 or R^2 or both R^1 and R^2 with a hydrogen atom.

6. The method of claim 1, wherein R^1 is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and R^2 is alkyl or haloalkyl.

7. The method of claim 1, wherein R^1 is Cbz.

8. The method of claim 1, wherein R^2 is *tert*-butyl.

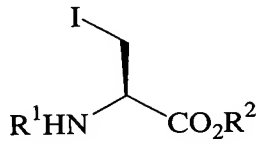
9. A method of making a compound of Formula IV,



IV ,

or a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein R^1 and R^2 are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

reacting a compound of Formula III,



III ,

or a corresponding stereoisomer having opposite stereochemistry of Formula III, with zinc to form an organozinc reagent; and

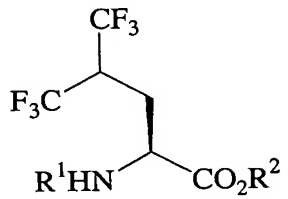
reacting the organozinc reagent with hexafluoroacetone to yield the compound of Formula IV or the corresponding stereoisomer, wherein R^1 and R^2 in Formula III are as defined in Formula IV.

10. The method of claim 9, wherein R^1 is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and R^2 is alkyl or haloalkyl.

11. The method of claim 9, wherein R^1 is Cbz.

12. The method of claim 9, wherein R^2 is *tert*-butyl.

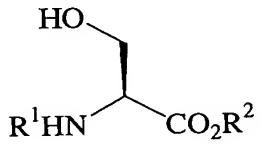
13. A method of making a compound represented by Formula I,



I ,

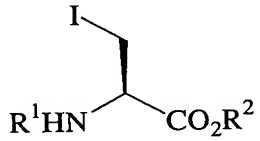
or a corresponding stereoisomer having opposite stereochemistry of Formula I, wherein R^1 and R^2 are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

reacting a compound of Formula II,



II ,

or a corresponding stereoisomer having opposite stereochemistry of Formula II, with an iodinating agent to yield a compound of Formula III,

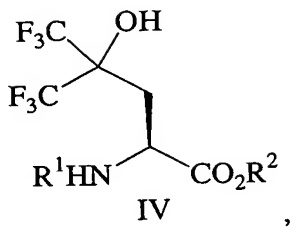


III ,

or a corresponding stereoisomer having opposite stereochemistry of Formula III;

reacting the compound of Formula III or the corresponding stereoisomer with zinc to form an organozinc reagent;

reacting the organozinc reagent with hexafluoroacetone to form a compound having a tertiary hydroxy group as represented by Formula IV,



IV ,

or to form a corresponding stereoisomer having opposite stereochemistry of Formula IV;

displacing the tertiary hydroxy group using radical deoxygenation to yield the compound of Formula I or the corresponding stereoisomer, wherein R^1 and R^2 in Formula II, Formula III, and Formula IV are as defined in Formula I.

14. The method of claim 13, further comprising:

de-protecting the compound of Formula I or the corresponding stereoisomer having opposite stereochemistry of Formula I by replacing R^1 or R^2 or both R^1 and R^2 with a hydrogen atom.

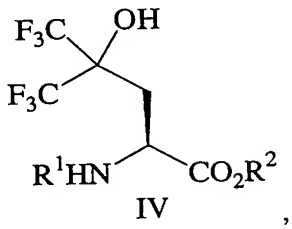
15. The method of claim 13, wherein R^1 is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and R^2 is alkyl or haloalkyl.

16. The method of claim 13, wherein R^1 is Cbz.

17. The method of claim 13, wherein R^2 is *tert*-butyl.

18. The method of claim 13, wherein the iodinating agent is methyltriphenoxyphosphonium iodide.

19. A compound of Formula IV,



IV ,

or a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein R^1 and R^2 are, respectively, *N*-terminal and *C*-terminal protecting groups.

20. The compound of claim 19, wherein R^1 is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and R^2 is alkyl or haloalkyl.